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OFFICE OF THE  
DIRECTOR OF MEDICAL SERVICES,  
HEALTH DEPARTMENT,  
ZANZIBAR,

23rd May, 1961

Sir,

I have the honour to submit for the information of His Excellency the British Resident and for transmission to the Right Honourable the Secretary of State, the Medical Report of the Health and Sanitation conditions of the Zanzibar Protectorate for the year 1960.

I have the honour to be,

Sir,

Your obedient servant,

I. W. MACKICHAN,  
*Director of Medical Services*

THE HONOURABLE,

THE CIVIL SECRETARY TO THE GOVERNMENT,

ZANZIBAR



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# Health Department Annual Report

## 1960

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### PART I.—GENERAL REVIEW

The sudden death of His Highness the Sultan on 9th October, only three days after his return from Europe, came as a shock to everyone in the Protectorate. Because of his age and infirmities the journey was viewed with considerable anxiety, and the greatest possible care was taken to safeguard his health while travelling between Zanzibar and London. He was accompanied by a senior officer of the Health Department as personal medical attendant and while in the United Kingdom His Highness was seen by various medical specialists who all pronounced themselves satisfied with his condition. Towards the end of his tour his health gave rise to some anxiety due to his failing heart, and the end, when it came from this cause, was not altogether unexpected. His death was felt as a personal loss by everyone in the Protectorate.

2. As in previous years, the number of persons seeking medical attention increased considerably, making greater demands on the time of the medical staff, and causing the consumption of drugs and dressings to exceed the estimated requirements. In common with other departments, the Health Department's budget was kept as near as possible to the level of previous years, and as a result by the end of the year the medical stores was almost depleted of its drugs, and reserves had fallen to a dangerously low level.

3. The number of persons attending the new Out-patient Department at the Hassanali Karimjee Jivanjee Hospital, Zanzibar, reached the record total of 63,778 new attendances and 164,195 re-attendances. In relation to the population of Zanzibar island these figures may well mean that many persons who could attend their local Dispensaries are now coming into Zanzibar with the natural desire to be seen by a Medical Officer even for the most trivial causes. As a result of this the Medical Officers in the Out-patient Department have great difficulty in finding sufficient time to see all the cases referred to them, while the staff are employed in giving injections, medicines, and dressings, to patients who, in many cases, could have obtained them at their local Dispensary.

4. It must unfortunately be recorded that many of the senior members of the Nursing Staff are still treated in an unmannerly fashion by a minority of the general public. In particular visitors are sometimes unmindful of the welfare of the very sick patients in hospital, are noisy, and do not observe the normal rules regarding visiting hours. It is to be hoped that the general public will in time become more appreciative of the hard work and devotion of the nursing staff on behalf of their patients, and will co-operate in the very reasonable arrangements which are necessary for the good running of every hospital.

5. During the past year no epidemics of any of the major communicable diseases occurred in either Zanzibar or Pemba. Epidemic conjunctivitis once again was seen in the rural areas both in Pemba and Zanzibar. The reason for its spread is not yet known, but in some places there appears to be an association with the large numbers of flies seen at certain times of the year. The number of cases of Typhoid Fever also increased, and minor outbreaks in the Makunduchi area and in one of the prison camps, were promptly and efficiently dealt with.

6. The year 1960 marked the beginning of a new five-year period of development of Capital Works. The allocation to the Health Department for this period is approximately £50,000, and the projects as at present planned are as follows:—

Children's Ward, Zanzibar,  
Nurses Hostel, Zanzibar,  
Mortuary and Post-Mortem Room, Zanzibar,  
Rural Treatment Centres and housing,  
Housing for District Midwives,  
Electrical equipment for Pemba Hospitals.

7. During the year it was planned to build a new Children's Ward at the Hassanali Karimjee Jivanjee Hospital, Zanzibar; provide electrical equipment for Pemba, and rebuild two rural treatment centres in Zanzibar and Pemba. Money for the electrical equipment was immediately available, but the other projects were delayed until approval of Colonial Development and Welfare funds had been obtained. Because of this only a token amount of work could be done before the end of the year on the Children's Ward and treatment centres. At this moment children are accommodated in an old ward in the hospital grounds, which is unsuitable for the purpose. It was at first proposed to build a new ward as an isolated structure, but this plan was found to be both expensive and inconvenient, and accordingly it was decided to alter one wing of the second floor of the main hospital building to provide a complete paediatric unit of 26 beds. At present the wards to be converted are used for male tuberculosis cases who will be rehoused in the old out-patient block now freed by the opening of the new unit.

8. In Pemba the completion of the scheme for the development of the Zenubhai Karimjee Hospital, Wete, was held up because the first part of the project, namely the out-patient block, absorbed most of the money available, and the Womens' Ward as planned cost much more than the remaining money could cover. A new and simpler plan was prepared, and work was started at the end of this year. The proposed Tuberculosis Ward and new Operating Theatre will unfortunately have to be postponed for the present.

9. The Pilot Scheme for the eradication of Malaria under the auspices of the World Health Organization was continued during the year, and the third cycle of spraying was completed both in Zanzibar and Pemba by October. The project was due to be review in 1960 and accordingly, in June, a meeting was held in Zanzibar with the World Health Organization Malaria Advisers, Dr. de Meillon and Dr. Maffi. As a result of these discussions, it was decided that the project should proceed to the next stage of

complete eradication, and with this in mind, a new Plan of Operations was drawn up. The principle changes embodied in the new Plan were a change over from Dieldrin to D.D.T. and the simultaneous spraying of Zanzibar and Pemba. This will entail a slight increase in personnel and other costs to provide for the two teams, one in Pemba and one in Zanzibar. The decision was reached because for the first time the entomological control had proved disappointing. In Zanzibar between the second and third sprayings some definite places of increased incidence of mosquitoes had been found, while the residual action of Dieldrin was found to be much shorter than expected. The increased expenditure called for by the new Plan of Operations has been accepted in principle by the Zanzibar Government and by the World Health Organization. Unfortunately the third party in the scheme, namely UNICEF, have notified their intention of withdrawing their support on the grounds that they will in the future only support established eradication projects. Ways and means have been sought to find the necessary money to make up the deficit, since it would be particular unfortunate if this scheme had to be closed down or modified in any way at a time when results are most promising.

10. During the past year, groups of children born in the Protectorate since the previous spraying were examined, and in Pemba out of 961 infants only four positives were found, that is a parasite rate of 0.4 per cent. compared with previous one of 52.5 per cent. In Zanzibar 1,063 infants were examined and only eight positives were found, that is a parasite rate of 0.7 per cent. compared with 30 per cent. previously. Another survey of older children up to two years of age in Zanzibar has found only sixteen positives out of 833 examined, i.e. a rate of 2.0 per cent.

11. In anticipation of future surveillance, blood films are now examined from all new out-patients attending hospitals and Rural Health Centres in Zanzibar island. In the last three month of 1960 over 8,000 blood slides were examined giving a parasite rate of 1.7 per cent. in Zanzibar town and 3.0 per cent in rural areas. Further interesting figures show the fall in the parasite rate among school children over the past three years. The 1 to 5 years age group has now fallen from 56 per cent. to 14 per cent., and the 6 to 10 years group from 47 per cent. to 13 per cent. In this connection the report of the School Medical Officer is of interest in which he remarked on the lowered incidence of enlarged spleen among several thousand school children examined during the year.

12. The Tuberculosis Survey Team provided by the World Health Organization completed their work by April. The report of this survey is still awaited. It is understood that the number of cases found in rural areas were significantly lower than those in the towns and larger villages. In neither case were the number of positives found sufficient to cause alarm.

13. The Zanzibar branch of the British Medical Association continued its activities during the year. The highlight was a dinner given by the Association to Sir Douglas Robb, a prominent New Zealand Surgeon who was visiting Zanzibar for the first time. The dinner was held at the Agakhan Bungalow, and afterwards Sir Douglas Robb gave a talk on the medical services in New Zealand.

14. The St. John Ambulance Association increased the scope of its work considerably during the year. Two courses of lectures in First Aid were given by local Medical Practitioners, and the majority of those who took the examination qualified for certificates. There is now an enormous waiting list for those who wish to take the course, and it is particularly gratifying to record the large numbers of ladies who are coming forward for instruction. The Association also conducted examination of Brigade members during the year. It is hoped that in the near future it will be possible to form a further division of the Brigade as more candidates complete their examinations.

15. The Zanzibar branch of the British Red Cross Society continued its close association with the Health Department, and was of particular assistance in the Blood Transfusion Service which is slowly being built up.

16. Finally mention must be made of the honour accorded by His Highness the Sultan to a member of the Health Department staff, namely Staff Nurse Bibi Khadija Salum Mecca who received the Order of the Brilliant Star 4th Class. It is believed that she is the first lady in Zanzibar, except for members of the Royal Family to receive this decoration.

### **Staff**

17. During the year one Medical Officer was recruited from the United Kingdom on a short term secondment from the National Health Service. A locally born Medical Officer was also appointed. He has trained in Cairo, and obtained a registrable degree in the United Kingdom. Three or four applications from locally born persons holding registrable degrees were also received, and the Department now has a waiting list for Medical Officers.

18. The post of Superintendent to the Mental Hospital was filled towards the end of the year by an officer who has already completed one contract tour in Tanganyika.

19. During 1960 four Nursing Sisters resigned or were transferred to other territories. Two new Sisters, Miss Walker and Miss Hassanali, arrived on first appointment to the Department. The latter is the second Zanzibar girl to be appointed as a Nursing Sister, after completing her full training in the United Kingdom. At the end of the year there were two vacancies with the expectation of others soon to follow. In the small establishment of Nursing Sisters for Zanzibar the shortage of even one Sister throws a considerable strain and extra work on her colleagues. It is hoped that in the new year recruiting will improve as more of the local girls complete their training and others are appointed by the Overseas Nursing Service.

20. During the year 1960 the following new posts were approved in the establishment of the Health Department:—

- 1 Clerk,
- 1 Driver.

**Finance**

21. In view of the constitutional changes and the alteration of the financial year to begin on 1st July, 1961, draft estimates were prepared for the first six months only of 1961. In these, new services had to be cut to the minimum and no provision made for expansion until after the July budget.

22. At the end of the year preparations were completed for the Health Department to become self-accounting. It is hoped this will improve the speed with which financial transactions can be carried out, and allow the Department to keep a closer watch on its own finances.

23. The estimated Protectorate expenditure for 1960 was £2,612,157, of which £321,620 was allocated for Health services, representing approximately 12 per cent. of the total budget.

24. Of the above allocation Personal Emoluments amounted to £187,595, Other Charges to £127,865, and Special Expenditure to £6,160.

**Visitors**

Professor A. W. Woodruff of London School of Hygiene and Tropical Medicine, and Dr. R. Lewthwaite, C.M.G., O.B.E., Director of Colonial Medical Research—17th to 19th January.

Professor D. B. Jelliffe, Paediatric Unit of Makerere College—16th January.

Dr. K. A. R. Martin, World Health Organization—11th January.

Dr. R. Coatney, Adviser to World Health Organization on Population Movements—26th to 31st March.

Dr. O. M. Derryberry, Medical Director, Tennessee Valley, U.S.A.—9th to 10th April.

Mr. R. Mansell-Prothero, Adviser to World Health Organization on Population Movements—12th to 16th April.

Dr. J. M. Liston, C.M.G., Deputy Chief Medical Officer at the Colonial Office—6th May.

Dr. W. H. R. Lumsden, Director of East African Trypanosomiasis Research Organization, Uganda—27th to 30th May.

Sir Douglas Robb, C.M.G., Pro-Chancellor of Auckland University—11th to 13th June.

Dr. Wallace Peters, World Health Organization Fellow from Papua—25th to 28th June.

Professor R. J. Kellar, M.B.E., Professor of Obstetrics and Gynaecology at the University of Edinburgh—19th to 23rd September.

Mr. A. F. Daldy from the Tropical Building Section of the Department of Scientific and Industrial Research—28th October.

Dr. V. S. Jha, Director of Commonwealth Education Liaison Unit in London—8th to 9th November.

Mr. Duncan Guthrie, Director of Polio Research Fund—1st to 2nd December.

Dr. John Hanlon, U.S. Public Health Consultant to the International Administration—1st December.

**PART II.—TRAINING****Overseas Training**

26. One Medical Officer, Dr. T. S. Derola, attended the first part of the course leading to the Diploma in Ophthalmic Medicine and Surgery while on leave in the United Kingdom.

27. Mr. Masoud Ibrahim, a Hospital Assistant, was sent to England and attended a course in Tuberculosis nursing with a view to strengthening the Tuberculosis Unit.

28. Senior Staff Nurse Khadija Salum Mecca, who has been in charge of the theatre at the Hassanali Karimjee Jivanjee Hospital, Zanzibar, went to England for the Ward Sisters' Course.

29. Two more Midwives attended a refresher course in Midwifery at the Princess Margaret Hospital, Dar-es-Salaam.

30. Mr. Ali Khamis, an assistant radiographer, was sent to the King George VI Hospital in Nairobi for further training.

31. In addition to the above members of the department on courses of instruction, there are other students from Zanzibar taking courses overseas in medical and allied subjects. As far as can be ascertained these are as follows:—

Dentists	...	...	...	...	...	3
Doctors (including those taking postgraduate courses)	...	...	...	...	...	30
Nursing Sisters (S.R.N., S.C.M.)	...	...	...	...	...	24
Pharmacists	...	...	...	...	...	4
Physiotherapists	...	...	...	...	...	1
Laboratory Technicians	...	...	...	...	...	1
Mental Nurse	...	...	...	...	...	1
Public Health	...	...	...	...	...	1

**Local Training**

32. The number of students at the Nurses Training School, Hassanali Karimjee Jivanjee Hospital, Zanzibar, at the end of the year was 55.

33. Miss Jones, the Sister Tutor, went on leave in July, and her second in command, Mr. Abdulkadir Ali, carried on in her place. At the beginning of the year the new intake of students numbered twelve. Of these, six were men all of Standard XII, and six were girls, two of whom had the Junior Cambridge Certificate. One male candidate failed the preliminary examination, and the eleven others passed and went on to intermediate training.

34. Intermediate examinations were held in June. Eleven candidates sat for these of whom seven passed, and the rest were referred. Final and Intermediate examinations are held at the end of the year.

35. The second lot of students in training under the World Health Organization Health Tutor took their final examination during the year. Of the fourteen students in this class, one left the course, and of the remaining thirteen, twelve satisfied the examiners in June. The remaining student was referred and will be re-examined.

36. As a result of the two courses completed, there are now sixteen Rural Health Assistants operating in the field. Fourteen are posted at twelve of the twenty-two Rural Health Centres, and the other two at Urban Dispensaries. The remaining thirteen students, comprising eight from the first course and five from the second, were chosen to go on to the new course for Health Inspectors begun in October; of these one has fallen out. Originally it was intended that these twelve student Health Inspectors were to train for a local Zanzibar qualification only, but during the year it was decided that students would be allowed to make their own arrangements to take the East African Examination of The Royal Society of Health if they wished. There is some difficulty in training the students due to the lack of facilities for practical demonstration of the theoretical training, but arrangements have been made with the Tanganyika and Kenya Governments for the students to visit Dar-es-Salaam and Nairobi for short periods during 1961.

37. The training of Midwives at the Hassanali Karimjee Jivanjee Hospital, Zanzibar, was discontinued pending the return of Miss Neillis who went to the United Kingdom to attend a Sister Tutors Course in Midwifery. It is hoped that the new class in 1961 will produce sufficient Midwives to help fill the existing vacancies in the Department.

38. Unfortunately the training project for District Midwives has made no further progress, but it is hoped that by 1962 the World Health Organization will be in a position to provide a Sister Tutor to train girls for this work in the rural areas.

### PART III.—CURATIVE SERVICES

#### A. Hospitals

39. A small increase in accommodation at the Hassanali Karimjee Jivanjee Hospital, Zanzibar, and a small decrease at Chake Chake Hospital, Pemba, was made during the period under review. The bed state of the various hospitals at the end of 1960 was as follows:—

(a) *General Hospitals*

Zanzibar	...	...	273 (including 51 TB beds and 25 maternity beds).
Wete, Pemba	...	...	81 (including 7 TB beds and 10 maternity beds)
Chake Chake, Pemba	...	43 (including 2 TB beds and 7 maternity beds)	
Mkoani, Pemba	...	23 (including 6 maternity beds)	
(b) Zenubbai Karimjee Hospital, Dole, Zanzibar	...	40	
(c) Mental Hospital	...	185	
(d) Isolation Hospital, Changuu Island	...	30	
(e) Prison Hospital	...	17	
(f) Walezo Leprosarium, Zan- zibar	...	100	
(g) Makondeni Leprosarium, Pemba	...	100	
(h) Makunduchi Maternity Centre	...	6	

40. There are 324 general beds available for the population of 299,111, or one for about every 900 of the population; 53 maternity beds, or one for about every 5,600 of the population; and 100 tuberculosis beds, or one for about every 3,000 of the population.

41. In all 9,682 cases were admitted for treatment at hospitals in 1960.

#### **Hassanali Karimjee Jivanjee Hospital, Zanzibar**

42. During 1960 the numbers of both in-patients and out-patients, particularly re-attendances, continued to increase. The new Out-patient Department, although dealing with far more persons than it was designed for, worked reasonably effectively, mainly due to the tireless work of the Sister in charge in marshalling, organizing, and humouring the multitude of patients attending every day.

43. One of the greatest problems is to sort out the really serious cases as soon as possible and despatch them for treatment. It is a tribute to all members of the staff that this is accomplished with the minimum of delay.

44. The number of attendances in the Out-patient Department during 1960 were as follows:—

New patients	...	...	63,778
Repeat patients	...	...	164,195
			<hr/>
Total	..	227,973	<hr/>

45. This gives an average of 19,000 cases seen each month with a daily attendance of 680, including Sundays. With such numbers presenting, the medical staff have the utmost difficulty in finding enough time to devote to each individual case. In addition a large staff is required merely to control the movements of the mass of persons in the limited space available.

46. Many of the patients attending have only minor ailments, but nevertheless take up much of the doctors' valuable time which should be devoted to the more seriously sick.

47. In an effort to reduce the numbers at the morning sessions, no less than 16 special clinics have been instituted. These have developed satisfactorily, and in time should relieve the pressure in the general section.

48. The new card index system, despite inevitable teething troubles, operated efficiently throughout the year.

49. A casualty ward with six beds attached to the Out-patient Department was opened during 1960. This was badly needed and enables admissions to hospital to be confined to genuine in-patient cases.

50. The minor theatre in the Out-patient Department dealt with 1,690 cases in the last six months of the year.

51. The hospital kitchens were improved by the laying of a new floor and tiling part of the walls. Much, however, still remains to be done before it will reach the standard expected of a modern hospital.

52. The installation of a Cold Room adjacent to the kitchen was of enormous benefit and greatly assisted the Housekeeper in the problems of catering for the increasing numbers of in-patients.

53. Early morning visiting hours continued to cause serious inconvenience to staff and patients as in previous years. The ill effects of such visits both on the working of the hospital and on the seriously ill patients are emphasised by the Surgical Specialist in his report.

### **Zenubbai Karimjee Hospital, Wete**

54. During the year 1960 the number of admissions to hospital were more than ever before, 1,880 cases being admitted, compared with 1,710 in 1959.

55. In the Out-patient Department the numbers remained fairly constant, 30,624 cases attending in 1960, compared with 31,678 in 1959.

56. The number of major operations performed was 383 compared with 376 the year before. As usual the number of fractured spines was considerable, amounting to nineteen in all.

57. The building of the new Women's Ward began late in the year on the site of the old Out-patient Department, and considerable alterations were made to the old kitchen prior to the installation of electric cookers. Other electrical equipment for the hospital arrived during the year, and will be of considerable assistance in the running of the hospital.

58. In view of the fact that the rebuilding of the operating theatre had to be postponed due to lack of funds, the minor theatre in the Out-patient Department has been slightly altered and is now being used for major operations.

59. Plans for rebuilding the maternity section when there is enough money have also been prepared. This is badly needed, since the present one is not suitable for the purpose.

#### **Chake Chake Hospital, Pemba**

60. The hospital buildings are old and out of date, but replacement will be difficult owing to the hilly nature of the site.

61. Redecoration was carried out during the year, and the operating theatre was repaired due to the fact that one corner of the building had sunk with consequent cracking of the adjacent walls. With the installation of electricity it has been possible during the year to re-equip the hospital with lights, fans, electric sterilizers, etc.

62. The number of out-patients increased during the year, 29,696 cases attending compared with 24,870 in 1959.

63. In-patients remained much the same being 1,238 only 26 more than in the previous year.

64. With only one Medical Officer available for the hospital, most major operations had to be carried out under spinal anaesthetics. These amounted to 87 during the year.

65. The Medical Officer reported a sudden rise in cases of malaria in the month of December after a year in which the number of cases had been negligible. Tuberculosis was also a problem during the year due to the shortage of beds for cases awaiting admission to the Tuberculosis Unit in Zanzibar. It is hoped to increase the number of beds in the coming year, and so remove the necessity for the out-patient treatment of new cases, which is not satisfactory.

66. As in other hospitals in the Protectorate, the card index system for out-patients was introduced and operated successfully.

#### **Mkoani Hospital, Pemba**

67. This hospital is in charge of a Senior Hospital Assistant, with a Nurse Midwife looking after the maternity cases. It is visited weekly by the Medical Officer and Nursing Sister from Chake Chake.

68. The number of in-patients remained substantially the same as in previous years, 377 cases being admitted compared with 384 in 1959. The Out-patient Department, however, was rather busier than in other years. 12,197 attendances were recorded, compared with 10,335 in 1959.

69. No major repairs or alterations were carried out to the buildings during the year.

70. Conjunctivitis, Chicken Pox, and Measles, were seen in large numbers during 1960. Mention is made by the Officer in charge of the very few cases of malaria now seen. Cerebral malaria in children is reported as having almost vanished.

### **B. Rural Treatment Centres**

71. The thirteen Rural Treatment Centres in Zanzibar were increased by the establishment of a sub-Dispensary at Nungwi in the extreme north of the island, which is attended by an extra Rural Health Assistant posted to Mkokotoni. In addition another extra Rural Health Assistant was sent to Makunduchi. Uzini was also up-graded to a major Rural Treatment Centre during 1960, and a Rural Health Assistant was posted there for full time duties.

72. During the year some of the Rural Health Assistants were selected for a Health Inspectors Training Course and posted to Zanzibar. Their places were filled by the newly qualified Rural Health Assistants.

73. The attendances in many Centres increased, and the number of new cases registered was 75,566.

74. A limited Yaws campaign was organized during the year in the northern part of the island, its main object being to find and treat all infective cases and contacts. In all 1,037 cases received treatment, of which 42 were in the primary stage, and 91 were direct contacts.

75. A small outbreak of Typhoid Fever occurred near Makunduchi in September, 1960. Immediate inoculations of all the local inhabitants was carried out by the Department, 2,516 persons attending the Dispensary for this purpose. As a result the outbreak died out at once, and no further cases were reported.

76. Some improvement is reported in the sanitation of the rural areas. The new Rural Health Assistants gave talks and advice on hygiene and sanitation, and successfully supervised the distribution of cement latrine slabs.

77. In Pemba the nine Dispensaries continued to function. A start was made to rebuild the old Unit at Ole in permanent materials, and some urgent repairs were carried out in Kinazini, which is scheduled to be rebuilt under the present programme. Kojani island was visited and a tentative site selected for the building of a new Dispensary and house adjacent to the main village.

78. The total number of attendances continued to be high and numbered 59,974 in 1960.

79. Chicken Pox and Measles were recorded as the main epidemic diseases seen at Rural Dispensaries during the year. Conjunctivitis also occurred for approximately three months during April, May and June. Yaws is reported as declining, and malaria is stated to be rarely seen. Bilharzia, however, is still endemic in many parts of Pemba.

**Comparative Returns of Patients treated in Hospitals and Rural Dispensaries**

*80. General Hospital and Treatment Centre Returns.*

<i>Hospitals</i>		<i>In-Patients</i>				
		1956	1957	1958	1959	1960
Zanzibar Town	..	3,070	5,082	4,466	5,923	6,466
Wete	..	1,617	1,678	1,708	1,669	1,880
Mkoani	..	1,197	408	373	384	377
Chake Chake	..	1,300	1,160	1,100	1,212	1,238
<b>TOTAL</b>	..	<b>7,184</b>	<b>8,328</b>	<b>7,647</b>	<b>9,188</b>	<b>9,961</b>

*81. Out-patients.*

<i>Hospitals</i>		<i>Out-Patients</i>				
		1956	1957	1958	1959	1960
Zanzibar Town	..	61,207	65,266	65,712	94,538	84,704
Wete	..	22,662	27,358	25,436	32,570	30,624
Mkoani	..	6,642	10,515	8,602	10,335	12,197
Chake Chake	..	19,808	21,629	21,081	24,870	29,596
<b>TOTAL</b>	..	<b>110,319</b>	<b>124,768</b>	<b>120,831</b>	<b>162,313</b>	<b>157,121</b>

*82. Rural Treatment Centres.*

Zanzibar	..	..	..	..	75,566
Pemba	..	..	..	..	59,974

*83. Comparative Table of Principal Diseases treated during 1960.*

		1959	1960
Affections of the respiratory system (excluding pulmonary tuberculosis)	...	42,315	37,602
Affections of the digestive system	...	34,413	29,827
Anaemia states	...	23,557	25,576
Injuries and wounds	...	20,122	17,897
Malaria	...	12,790	7,823

84. In addition to these diseases, it is interesting to record notification figures for the following conditions.

		1959	1960
Pulmonary Tuberculosis	...	—	313
Leprosy	...	44	102
Enteric infections	...	82	40
Poliomyelitis	...	8	16

85. The principal causes of deaths occurring in Government Hospitals in 1960 were as follows:—

Respiratory tuberculosis	...	...	...	...	...	27
Malaria	...	...	...	...	...	3
New growths	...	...	...	...	...	27
Anaemias	...	...	...	...	...	29
Diseases of nervous system	...	...	...	...	...	14
Circulatory diseases	...	...	...	...	...	50
Alimentary diseases including intestinal obstruction						75
Genito-urinary diseases	...	...	...	...	...	22
Diseases of pregnancy and the puerperium						20
Injuries	...	...	...	...	...	29
Pneumonia	...	...	...	...	...	37

**Births and Deaths**

86. The total number of births in Zanzibar and Pemba which were registered in 1960 came to 7,228. One hundred and fourteen deaths of infants under one year were also reported out of a total of 1,711 deaths registered.

**C. Special Hospitals***Infectious Diseases Hospitals*

87. It was not found necessary to make use of either the Infectious Diseases Hospital on Changuu island, or the Infectious Diseases Camp at Wete in Pemba.

*Leprosaria*

88. There are two leprosaria in the Protectorate, one at Walezo in Zanzibar island, and the other at Makondeni in Pemba.

89. Treatment with the sulphone drugs was continued, and both in-patients and out-patients were co-operative in this.

90. There was a considerable increase in the number of cases notified in 1960 over that in 1959, the figures being 102 and 44 respectively. This is not considered to reflect an increased incidence of the disease; it seems more likely that effective out-patient treatment over the past few years had induced more patients to come forward.

91. A total of 100 cases was accommodated in the leprosaria at the end of 1960 as compared with 83 at the end of 1959.

*Walezo Home for the Aged and Indigent*

92. The District Medical Officer, Zanzibar, visits Walezo weekly in his capacity as Medical Officer in charge of the Home. The daily management of the Home and the ministration of medicines, etc., are the responsibility of the Sister in charge, who is seconded from the local Catholic Mission. The Assistant Welfare Officer also pays regular visits and is responsible for the personal and domestic affairs of the inmates. In addition the Medical Officer in charge of the T.B. Unit is responsible for the incurable cases of Tuberculosis which are housed in the Institution.

93. At the beginning of the year there were 160 inmates in the home. 91 persons were admitted during the year, 36 were discharged, and 55 died. At the end of December, 1960, there were 160 persons remaining in the Home.

**D. Specialist Services***Maternity Services*

94. During 1960 the number of deliveries in the various Hospitals and Maternity Units once more increased.

The total number of maternity beds at present available in Zanzibar Protectorate is shown below, together with the number of confinements conducted in the various units:—

	<i>Beds</i>	<i>1959</i>	<i>1960</i>
Hassanali Karimjee Jivanjee Hospital, Zanzibar..	25	934	1,089
Zenubbai Karimjee Hospital, Wete, Pemba ..	10	269	288
Chake Chake Hospital, Pemba .. ..	6	182	233
Makunduchi Centre, Zanzibar .. ..	6	183	249
Mkoani Centre, Pemba .. ..	6	110	124
Mwembeladu Maternity Home, Zanzibar (non-Government) .. .. ..	14	854	816
<b>TOTAL</b> .. .. ..	<b>67</b>	<b>2,532</b>	<b>2,799</b>

95. The total number of confinements in 1960 were approximately 1,000 more than in 1958. This has produced a great strain on the number of beds available, and emphasises the need for more trained staff.

96. The Zanzibar Maternity Association continued to operate the Mwembeladu Maternity Home in the face of considerable financial difficulty. The Association is now saddled with an Annuity to be paid to the original midwife in charge of the Home, while at the same time Government subvention has been cut down by some £400. In order to try to make ends meet and avoid the use of the small capital reserve, a charge of Shs. 10/- was instituted for delivery in the Home. This on the whole has not had the anticipated effect of decreasing the number of patients attending, and has gone a long way towards making the Home more nearly self supporting. Such patients as did not wish or could not pay the charge, attended the Hassanali Karimjee Jivanjee Hospital with an inevitable increase in the work carried out by that Unit.

97. At the same time the contributing parties agreed to increase their contribution for domiciliary deliveries from Shs. 40/- to Shs. 60/-. This again has caused a falling off in the number of persons availing themselves of the service of the Association's Midwives.

98. In addition to the 816 births recorded above during the year, 366 cases were delivered at home by District Midwives attached to Mwembeladu. This is a considerable decrease from previous years, but is probably due to the raised charges and also the fact that other trained Midwives are becoming available in Zanzibar town for domiciliary deliveries.

99. An analysis of the cases dealt with in the maternity unit of the Hassanali Karimjee Jivanjee Hospital, Zanzibar, gives the following figures:—

		<i>1959</i>	<i>1960</i>
Primipara	...	262	502
Multipara	...	665	826
Abnormal Confinements	...	101	130
Premature infants born	...	115	134
Stillbirths	...	17	72
Infant deaths (including premature births)	45	41	
Maternal deaths	8	8	

100. It will be noted that in spite of the increased numbers of confinements taking place, the number of maternal deaths still remains low.

101. The analysis of the ante-natal abnormalities detected at the Hassanali Karimjee Jivanjee Hospital, Clinic during the year is as follows:—

*Ante-Natal Abnormalities*

Abnormal Pelvis	...	...	...	31
A.P.H.	...	...	...	18
Accidental Haemorrhage		...		6
Placenta Praevia		...		10
Pre-eclamptic Toxaemia		...		80
Eclampsia	...	...	...	7
Hydramnios	...	...	...	5
Hydatidiform mole	...	...	...	1

102. This is of interest in that it shows the large numbers of cases of pre-eclampsia toxaemia discovered, and also of outright eclampsia. It also shows the extreme value of these clinics since had many of these cases come to term without detection the maternal mortality might well have been greatly increased.

103. In addition to the above, 65 cases of Anaemia were detected, three of active Tuberculosis, and two of cardiac disease.

104. Including repeat visits, a total of 13,524 attendances were recorded at the ante-natal clinics held at the Hassanali Karimjee Jivanjee Hospital, Zanzibar. At Makunduchi there were 1,680 attendances. The recently instituted post-partum clinic in Zanzibar had 855 attendances. It is of interest to record the large number of babies born in the Hassanali Karimjee Jivanjee Hospital whose mothers had attended ante-natal clinics. These came to 1,056 out of a total of 1,089 deliveries in hospital.

**Holmwood Mental Hospital**

105. Admissions were again higher than in previous years, and great difficulty was experienced in discharging sufficient patients to keep within the authorised bed strength. By making use of the procedure whereby patients can be sent to the care of a relative for a trial period, a greater number of discharged have been possible than would normally occur, and at the end of the year the overall figure of in-patients had been reduced by three.

106. The difficulties holding up the discharge of many patients are reported as—

- (a) Repatriation.
- (b) the lack of accommodation at Walezo for mild cases requiring Institutional care outside a Mental Hospital.
- (c) The unwillingness of relatives to accept patients on discharge.

The latter cause has resulted in several re-admissions of patients who could well be cared for at home.

107. Increased efforts are now being made to gain the interest of both acute and chronic patients in occupational therapy. Suitable cases are

now assisting in keeping the grounds tidy, and more use of the grounds for exercise is now being made. The making of sisal mats and coir rope will be undertaken in the near future.

108. The number of in-patients on the 31st December, 1960, was 242. During the year there were 138 admissions including re-admissions, and 141 discharges. Seven patients died during the year.

109. The various types of mental diseases treated during the year were as follows:—

*Psychoses*—

Manic Depressive	...	...	36
Involutorial Melancholia	...	...	9
Schizophrenic Reaction Types	...	...	153
Paranoid	...	...	14
Confused States	...	...	22
Chronic Organic G.P.I.	...	...	20
Senile	...	...	4
Epilepsy	...	...	29

*Neuroses*—

Anxiety States	...	...	7
Hysteria	...	...	8
Psychopathic Personality	...	...	1
Mental Deficiency	...	...	21
Unclassified	...	...	10
			334

**Surgery**

110. The Surgical Unit at the Hassanali Karimjee Hospital, Zanzibar, consists of a Surgical Specialist, a full time Assistant who is a skilled Ophthalmic surgeon in addition to his high standard as a general surgeon, a full time anaesthetist who is capable of modern anaesthetic techniques, and a general duty officer on a rotating basis who is responsible for the routine care of the patients in the unit as well as receiving training in basic surgical and anaesthetic technique.

111. At other hospitals the Medical Officer in charge is required to deal with the surgical emergencies and to undertake simple routine surgical work.

112. The number of major and minor operations carried out in the main hospitals of the Protectorate are as follows:—

			1959	1960
Zanzibar:	Major operations	..	704	940
	Minor operations	..	1,533	1,690
Wete:	Major operations	..	376	382
	Minor operations	..	532	429
Chake Chake:	Major operations	..	43	87
	Minor operations	..	355	599
Mkoani:	Major operations	..	—	—
	Minor operations	..	68	47
	TOTAL	..	3,611	4,174

113. The Surgical Specialist reports that the need for an autonomous department in Obstetrics and Gynaecology with a Specialist in this field of charge is urgently needed. The general surgical unit had to carry out a large number of gynaecological and obstetrical operations during 1960. The Surgical Specialist has to devote a great deal of time to this work at the expense of general surgery.

114. The need for special Orthopaedic facilities is made clear by the large incidence of fractures of all kinds including clove pickers' fractures of the spine with paraplegia. The prevention of such fractures has received much thought but it is a difficult problem and sooner or later preventive measures will have to be enforced when such are invented. There is also a considerable incidence of deformities such as club-foot and those following poliomyelitis. Until it is more widely known that such cases are amenable to orthopaedic surgery, the number presenting will not reflect the cases involved. Nevertheless at least one case of talipes per month is seen at the Hassanali Karimjee Hospital, Zanzibar, alone.

115. At present the facilities for orthopaedic work are only rudimentary but a beginning has been made with the opening of special Orthopaedic and Fracture clinics during 1960, at which Workmen's Compensation cases are seen and assessed.

116. The Department still lacks the services of a full time Physiotherapist, but there is a local girl at present undergoing training in the United Kingdom, and it is hoped that in due course she will be attached to the Hassanali Karimjee Jivanjee Hospital, Zanzibar.

117. During the year special tuition was given to a member of the Nursing staff who has shown special aptitude in basic physiotherapy, fracture management and plaster of paris technique. It is hoped that he will be sent for further training at some future date.

118. In addition the Department still lacks the necessary apparatus for rehabilitation such as a gymnasium, swimming pool, and orthopaedic workshop.

119. In the field of Gastro-intestinal surgery the problem of hernia still remains unsolved. The present surgical unit is far too small to deal with the numbers involved and during 1960 the aim was to treat on a priority basis the younger population by accepting all cases under the age of ten. Other cases were dealt with according to the degree of urgency, occupation, distance from the hospital, etc.

120. Genito-urinary surgery once again formed a great part of the work in the unit. Hydrocele, benign prostatic hyperplasia, stricture of the urethra, and conditions due to schistosomiasis were common.

121. Among the more uncommon conditions met with during the year were radical mastectomy, popliteal aneurysm, and endoscopic removal of cog-wheel and coins from the oesophagus.

122. In the report on the surgical unit from the Hassanali Karimjee Jivanjee Hospital, Zanzibar, the danger to surgical patients arising from the early morning visiting was emphasised. Visitors at this time may introduce

sepsis endangering the cases about to be operated upon; they also interfere with pre-operative preparation of the patients, and with dressing routines. Visitors and unauthorised trespassers also interfere with the work, at times even to the point of invading the operating theatre.

### Medicine

123. The Medical Specialist reports that during 1960 respiratory diseases continued to be the commonest reason for admission. Tropical Eosinophilia of which there were eight cases form an interesting little group, the cases occurring among all races, except Europeans.

124. In view of recent work in India which suggests that in that country the condition results from the presence of microfilariae in the lung, investigations were initiated along those lines, including treatment with Hetravan. Here, however, the results were unsatisfactory, and a better response obtained by use of intravenous arsenicals.

125. Comparison of paying and non-paying patients in the Hassanali Karimjee Jivanjee Hospital, Zanzibar, reflects to some extent the results of socio-economic differences; for instance nutritional disorders in children accounted for 7.5 per cent. of the admission to non-paying wards, whereas none were admitted to paying wards. Similarly iron deficiencies in children accounted for 10 per cent. of admissions in non-paying wards, and 2.9 per cent. to the paying wards.

126. As reported elsewhere typhoid fever showed an increase and occurred sporadically throughout the year, 47 cases being treated, with no deaths.

127. Eighteen cases of tetanus were seen with only one death, a case of tetanus neonatorum. The low mortality indicates either a milder form of the disease, or the efficacy of the present standardised treatment which includes the use of anti-tetanus serum, chorpromazine and barbiturates, combined with intragastric or parenteral feeding in the early stages.

128. Malignancy is increasing slowly, and the following list of cases seen gives some indication of the types presenting:—

Carcinoma of Liver	...	...	7
Carcinoma of Oesophagus	...	...	2
Carcinoma of stomach	...	...	1
Brain tumour	...	...	1 (unconfirmed)
Carcinoma of naso-pharynx	...	...	1
Lymphosarcoma	...	...	1
Leukaemia	...	...	1
Carcinomatosis	...	...	2
(primary not discovered)			

129. The predominance of carcinoma of the liver is undoubtedly related to the prevalence of chronic liver disease (cirrhosis).

130. It is also interesting to note that the predilection of small children for imbibing kerosene led to the admission of fourteen cases, fortunately with no serious after-effects.

### Pathology

131. The new laboratory building was in full use during the year, and the better facilities afforded assisted the work of the section. Inevitably certain deficiencies in design came to light, which will need to be remedied when funds permit.

132. A small-angle centrifuge was obtained for use in blood grouping and cross-matching, which have attained such proportions that they tend to swamp the many other equally important activities and monopolise some of the equipment. Also an additional refrigerator, second-hand, was installed and regulated and reserved under lock and key for the storage of blood, pending the acquisition of a proper and more dependable blood bank refrigerator.

133. The new laboratory at Wete, Pemba, is a very great improvement. During the year several items of equipment which can be operated by electricity, were installed, and although one major requisite, an autoclave is still required, a start has been made towards the provision of modern clean electrically operated apparatus. Chake Chake laboratory unfortunately, must remain for the time being the Cinderella of Zanzibar laboratories.

134. One learner completed his three years of initial training, and another his second year. No additional learners were taken on owing to financial stringencies, which it is hoped will sufficiently ease to allow the training of two other laboratory assistants in the near future.

135. The following number of investigations was carried out:—

		1959	1960
Parasitological	.. ..	15,208	12,377
Serological	.. ..	1,769	1,638
Bacteriological	.. ..	9,574	9,413
Biochemical	.. ..	5,355	4,131
Haematological	.. ..	7,728	10,861
Histological	.. ..	89	231
<i>Post-mortems</i>	.. ..	46	56
Medicological	.. ..	86	97
<b>TOTAL</b>	<b>..</b>	<b><u>39,855</u></b>	<b><u>38,804</u></b>

136. An outstanding feature has been the remarkable increase in the number of blood groupings and cross-matchings. Two years ago this side of the Laboratory's work was negligible, and has since increased to the extent shown in the following table:—

	Jan.-June 1959	July-Dec. 1959	Jan.-June 1960	July-Dec. 1960
Average number of groupings per month	.. .. .. ..	24	64	108
Average number of crossmatchings per month	.. ..	—	—	21
				29

137. Approximately one transfusion per day is now being catered for, and a great deal of this work is emergency work occurring outside routine hours. A roster of six comprising the Laboratory Technologist, the Assistant Laboratory Technologist, and the four most senior Laboratory Assistants covers these out-of-hours duties, week and week about. It is hoped eventually

when a suitable refrigerator has been purchased and the Red Cross donor list has expanded, to organise a Blood Bank, as a result of which blood will be more rapidly available to the patients, and some degree of the relief will be accorded to the laboratory staff.

138. Histopathology, created a record with 231 specimens, those in recent previous years numbering about 100.

139. Autopsies increased to 58 as compared with 41 in 1959.

### Tuberculosis Services

140. The Chest Clinic at the Hassanali Karimjee Jivanjee Hospital, Zanzibar, under the direction of a specially trained Medical Officer, continued to work successfully during the year.

141. The male tuberculosis beds in the hospital were moved to the ground floor of the Siwa Haji Wing at the end of the year so that all tuberculosis cases are now accommodated in one block. Only one bed was lost to the Unit by reason of this move.

142. At Dole Hospital the new quarters for the staff were occupied by the middle of the year, and the kitchens received very necessary repairs.

143. The year 1960 marked the entry of the Unit into the I.N.A.H. Therapeutic trials sponsored by the Medical Research Council. These have been in progress since 1955, and the participation of the Chest Unit in Zanzibar shows that it is now recognised as having the specialist staff and equipment suitable for this kind of work. Sixteen beds have been set aside for this purpose, and were fully occupied during the year.

144. The total number of cases seen in the Chest Clinic during the year was 714, of which 314 cases were notified. Of the above cases, 77 came from Pemba, ten were referred by Private Practitioners, and the rest were transferred from general wards or Out-patient Departments. Thirty-two cases were found when contacts or open cases were examined.

145. The total number of contacts examined during 1960 was 1,006 of which 397 came from Kiembe Samaki School. B.C.G. vaccination was given to 114 contacts,

146. Three hundred sixty-nine cases were admitted to various wards of the Chest Clinic, and of these it is noteworthy that 118 were readmissions. Twenty-six deaths from this disease took place in hospital, and a further sixteen were reported as dying at home. Seventy-four cases were classified as "arrested" during the year.

147. The question of the problem of defaulters among the out-patients still remains to be solved. At the Chest Clinic out of 104 patients, 77 attended regularly during the year, and 27 defaulted. Sixty-seven cases were referred to Rural Health Centres in Zanzibar, and 57 to Pemba. Forty-three cases were repatriated to the Mainland. This again is unsatisfactory since they cannot be followed up.

148. Surprise urine tests for P.A.S. were carried out during the year, and 886 specimens were examined. Of these 98 were negative indicating a percentage defaulter rate of 11 per cent. among those taking *Pasinah*.

149. At the end of the year an attempt was made by the Medical Officer in charge of the Chest Unit to define the problem of Tuberculosis covering the period 1956 to 1960. A report of this will be found under the Research Section.

### Ophthalmic Services

150. In Zanzibar 35 eye operations were carried out during 1960, the majority for senile cataract and tarsectomy for entropion.

151. In the Zenubhai Karimjee Hospital, Wete, where the Medical Officer in charge has recently attended a course in Ophthalmic Surgery, 50 operations were carried out.

152. A refraction clinic was held regularly twice a week in Zanzibar, and 238 prescriptions for glasses were given. Special ophthalmic examinations were carried out for candidates for Government employment.

153. Cases of traumatic ophthalmia are still commonly seen and consist mostly of rupture of the eyeball and perforating injuries due to thorns. Of interest was one case in which the right eye was almost enucleated by a flying fish.

### X-ray Services

154. The X-ray department of the Hassanali Karimjee Jivanjee Hospital, Zanzibar, has five machines in full use as follows:—

Hassanali Karimjee Jivanjee Hospital X-ray Unit	...	Two mobile Units for light work and one Roentgen IV for heavy work.
Chest Clinic	...      ...	One mobile Unit for Chest work and one screening machine. These are being shared with the Chest Clinic.
Dental Clinic	...      ...	One Dental Unit under the Den- tal Surgeon.

155. Most of these machines have served for more than eight years, and as a result breakdowns are now frequent, especially to the Roentgen IV machine. Repairs are becoming extremely expensive, and it is hoped in due course that more modern machines will be installed.

156. A portable X-ray machine is also located at Wete in Pemba, and was replaced by a new one during the year.

157. In Zanzibar 7,701 X-ray investigations were carried out during 1960, compared with 6,993 in 1959.

158. In view of the increasing work it was difficult to arrange for all members of the staff to take the 28 days annual leave as recommended by the International Protection Commission. Plans are now in hand to increase the establishment to allow the full periods of leave for all members of the staff.

159. The existing accommodation in the Hassanali Karimjee Jivanjee Hospital is now too small for the volume of work, and it is planned to increase the accommodation in the new year.

### Dental Services

160. The new dental surgeries in Zanzibar and Wete have proved successful except for a few necessary adjustments. More electrical equipment arrived during the year and was installed in Wete and Chake Chake surgeries. The School Dental services were continued as usual, 53 schools being inspected during 1960. At these 12,268 students were seen, of whom 6,533 required treatment.

161. Figures showing the volume of work carried out by the Section during the year are as follows:—

	Attendances	Extractions	Fillings	Scalings
Schools .. .. ..	1,548	492	1,735	2
Out-patient clinic .. ..	12,731	16,069	—	—
Other patients, Officials and families and non-officials ..	2,101	258	825	124

	Casual Treatments			
	Attendances	Extractions	Fillings	Scalings
Other patients Officials and families and non-officials ..	446	—	—	—

162. Future policy is aimed at encouraging people in rural areas to attend their local Dispensaries for the extraction of loose teeth in order to reduce the pressure in the Out-patient Departments at the various hospitals, and thus allow Dental Surgeons sufficient time to give each person adequate treatment.

### Stores Services

163. The continued increase and improvement in treatment facilities throughout the Protectorate during the year has reflected on stores work generally and resulted in an added volume of overall activity. This particularly concerns the purchase and issue of drugs, dressings, and general stores on "The Standard Stock List" and items of special expenditure including surgical and electrical equipment for Zanzibar and Pemba.

164. The number of Crown Agents invoices, Local Purchase Orders and Public Works Department requisitions increased for the year with a proportional increase in issue vouchers.

165. As a result of the large overall increase in attendances at the Rural Health Centres and in-patient treatment at the Hassanali Karimjee Jivanjee Hospital, consumption of drugs and dressings showed a very marked increase over that of 1959. Consequently some difficulty was experienced towards the end of the year in supplying all requirements in full. Delayed arrival from the United Kingdom of Supplementary Indents on the Crown Agents aggravated this situation and necessitated the purchase of certain essential drugs from the Mainland.

166. Distribution of drugs to the rural Health Centres was considerably eased in the third quarter of the year with the receipt of the new Land Rover. Larger carrying capacity has been particularly useful as the quantity to be transported to each district has increased by more than 30 per cent. over that for 1959. Mileage covered by stores vehicles for drugs distribution and the transport of personnel and bulk of medical supplies to and from the docks, totalled 16,089 miles for the year.

167. The work of the carpenters shop should be mentioned with particular reference to the extensive renovation work carried out at the Hassanali Karimjee Jivanjee Hospital on fittings and furniture.

168. The tailoring department was responsible for making 3,103 articles of staff uniform for the year.

169. "In service" training of three learner dispensers continued, and all made satisfactory progress over the year.

170. The enactment of the Pharmacy and Poisons Bill commenced in 1959 was completed with the preparation for publication of the Poisons List.

### **Ambulance Services**

171. This was maintained with difficulty owing to the aging of vehicles and the lack of funds for replacements. In Zanzibar the two ambulances covered 46,000 miles between them compared with 41,000 the year before. There is still much abuse of the service and the vehicles are frequently summoned unnecessarily. A record of such calls is being kept, but it is extremely difficult to take action against the offenders.

172. In Pemba the Chake Chake ambulance gave a lot of trouble during the year, which is not unexpected since it has already done almost 60,000 miles. Heavy expenses had to be incurred in hiring transport to take its place while undergoing repairs.

**PART IV.—PUBLIC HEALTH****Communicable Diseases***Smallpox*

173. No cases of smallpox in the Protectorate were reported during the year. This is noteworthy because a large number of cases occurred in Dar-es-Salaam with which Zanzibar has very close communication by sea and air.

174. Vaccinations were continued on a large scale throughout the Protectorate, and the following numbers were vaccinated during the year:—

Zanzibar town and port	...	22,332
Zanzibar School children	...	651
Zanzibar District	...	1,020
Pemba	...	5,317

175. During the course of examination of school children carried out by the School Medical Officer during the year, vaccination was carried out on every child who had not previously been vaccinated. Most of the children in the town schools had already been protected, but in the rural areas large numbers still reach school before being vaccinated.

*Yellow Fever*

176. Zanzibar, in common with other East African territories, is by definition a yellow fever receptive area. International Certificates of vaccination against yellow fever are not required from travellers entering the Protectorate unless they have come from what may, from time to time, be declared an infected area.

177. Persons living in Zanzibar who are likely to undertake international travel are nevertheless, advised to provide themselves with an International certificate of vaccination, and to keep it valid by renewal at six-yearly intervals. It is for this purpose that yellow fever vaccination may be obtained free of charge by residents in the Protectorate at the Health Office, Zanzibar, and at the hospitals in Wete and Chake Chake, Pemba by appointment with the officers in charge.

178. Persons in transit who desire vaccination are now charged a fee for this service in conformity with the practice of other East African health authorities.

179. No cases of yellow fever were reported during the year.

*Plague*

180. No cases of this disease were reported. As in previous years constant watch was kept on the ports in both islands, and systematic trapping of rats was carried out to detect the appearance of the infection among the rat population.

181. No positive smears were obtained. A total of 3,835 rats were killed in Zanzibar by trapping and poisoning, and 48 were examined for plague; in Pemba 1,996 rats were killed.

## Malaria

182. The number of cases of malaria treated in medical units fell from 23,548 in 1958 to 12,609 in 1959 and in 1960 the numbers were further reduced to 7,823. This decline in the number of cases is clearly connected with the Malaria Eradication Campaign, although it is a continuation of a trend observed over the last few years. Of more significance than the number of cases reported are the results of the spleen and parasite surveys described below.

183. The third spraying cycle carried out by the World Health Organization team was completed in Pemba on the 18th October using Dieldrin. The fourth cycle in Zanzibar island was begun in November also using Dieldrin, and in Pemba in December but using D.D.T.

184. The early infant parasite survey in Zanzibar island was finished by the end of November. Those children under 11 months produced only eight positive cases among over 1,000 examined with an overall rate of 0.7 per cent. This refers only to those children born in Zanzibar, and who have never left the island. Among the non-indigenous children examined, two positives were found out of ten cases seen.

185. Among the children ages 12 to 23 months, an overall rate of 2 per cent. was found among 833 cases seen, while of the 16 non-indigenous children examined three were found positive.

186. Apart from this, an interesting comparison of the parasite rates following the first two sprayings is afford by tables taken from the Annual Report of the World Health Organization Project Leader. These are as follows:—

## Spleen and Parasite Surveys in Rural Zanzibar

*October, 1957 (before spraying)*

				Parasite rate
Infants	..	..	..	19.8% (131)
Children 1 year	..	..	..	44.4% (142)
Children 2-5	..	..	..	56.4% (910)
Children 6-9 ..	..	..	..	47.4% (584)

*October, 1959 (after two sprayings)*

				Parasite rate
Infants				2.6% (77)
Children 1 year	..	..	..	0.7% (72)
Children 2-5 ..	..	..	..	27.4% (412)
Children 6-9 ..	..	..	..	30.2% (533)

## Spleen and Parasite Surveys in Pemba

*January, 1958 (before spraying)*

				Parasite rate
Infants	..	..	..	65.3% (15)
Children 1 year	..	..	..	77.1% (83)
Children 2-5 ..	..	..	..	79.8% (485)
Children 6-9 ..	..	..	..	57.2% (481)

January, 1960 (after two sprayings)

					Parasite rate
Infants	..	..	..	..	1.7% (120)
Children 1 year	..	..	..	..	22.2% (72)
Children 2-5	..	..	..	..	53.7% (516)
Children 6-9	..	..	..	..	28.9% (583)

( ) Between brackets = number examined

187. As a beginning of the passive surveillance phase of the eradication project, the examination of blood slides from all out-patients attending Dispensaries in Zanzibar island was undertaken during the year.

188. The results are tabulated as follows:—

*Zanzibar Town*

Age Group	Examined	Positive	Negative	Rate
Up to 1	425	2	423	0.5
1 to 5	702	21	681	0.3
6-10	376	9	367	0.2
11-15	38	2	36	0.5
16-20	34	2	32	0.6
21	794	5	789	0.1
<b>TOTAL</b>	<b>2,369</b>	<b>41</b>	<b>1,328</b>	<b>1.7</b>

*Rural Areas*

Age Group	Examined	Positive	Negative	Rate
Up to 1	380	5	375	1
1-5	1,352	66	1,286	4.9
6-10	997	59	938	6
11-15	415	11	404	3
16-20	424	8	416	2
21	2,082	18	2,064	0.9
<b>TOTAL</b>	<b>5,650</b>	<b>167</b>	<b>5,483</b>	<b>3.0</b>

189. The conclusion can now be drawn that there has been a significant drop in the parasite rates among the infant population which must result in greatly improved health and a lower death rate among young children.

190. No figures apart from the above ones are available, but the general impression from all quarters is that malaria is now rarely seen among children, and that the attendance at schools has greatly improved over the past two years.

191. Nevertheless there is still evidence that there is some transmission of malaria going on in certain small areas due to the previous gap between sprayings not being sufficiently covered by the residual affect of the Dieldrin used. The future programme now aims at closing this gap by using D.D.T. and spraying more frequently in both Zanzibar and Pemba.

192. Important investigations into the problem of salt water breeding *A. gambiae* were conducted during the year as part of the eradication project. The results obtained can be summarised as follows:—

- (i) Salt water *A. gambiae* exists in two forms, but there is no known morphological characteristic for the separating of the salt water and fresh water strains.
- (ii) The only method of identifying the two forms is by their physiological reaction of the first stage larvae to 75 per cent. sea water.
- (iii) Salt water *A. gambiae* enter houses to feed but tend to leave soon afterwards.
- (iv) It is considered probable as a result of salivary gland dissections and infant parasite surveys that the salt water *A. gambiae* is not responsible for malaria transmission in Pemba.
- (v) The indications are that salt water *A. gambiae* is mainly exophilic, and prefers cattle to men.

#### *Schistosomiasis*

193. This remains a problem in certain rural areas of both Pemba and Zanzibar islands. The great majority are cases of infection with *schistosoma haematobium*, but *schistosoma mansoni* also occurs. Out-patient treatment with "Nilodin" appears to control the symptoms in most cases, but there is no reliable evidence as to the actual numbers cured. The number of cases compared with previous years is as follows:—

	1958	1959	1960
In-patients	... 23	... 2	... 38
Out-patients	... 2,284	... 3,313	... 5,020

#### *Poliomyelitis*

194. The incidence of this disease remains low but there has been a small increase in the number of cases notified in 1960. The public is less apathetic than formerly and the response to the offer of protective inoculation has improved, though there is still little room for complacency regarding this disease. Figures of cases and inoculations are as follows:—

	1956	1957	1958	1959	1960
Cases notified	.. ..	2	1	2	8 16
Inoculations—Zanzibar	..	—	—	72 127	428
Inoculations—Pemba	..	—	—	—	87

#### *Yaws*

195. The single injection treatment was continued during the year. Number of persons attending for treatment were as follows:—

1956	1957	1958	1959	1960
6,726	... 7,742	... 7,536	... 7,513	... 5,289

196. In the northern mudiria of Zanzibar island a localised campaign against Yaws was conducted during the year by the District Medical Officer. One thousand and thirty-seven cases were diagnosed and treated during the ten day campaign. Among these were 91 contacts and 41 primary cases.

#### *Venereal Disease*

197. The actual incidence of venereal disease throughout the Protectorate is not accurately known, but it does not appear to be high.

*Leprosy*

198. The number of cases notified during 1960 shows an increase over 1959, the figures being 99 and 44 respectively. This is not taken to mean an increase in the incidence of the disease, but almost certainly reflects an increasing awareness by the public that effective treatment is available.

199. The treatment of cases discharged from Leprosaria was continued at the Rural Treatment Centres. The District Medical Officer checks the progress of each case during his visit to the Centre at which time the patients receive their medicine for the ensuing week. Up to date attendances have been fairly satisfactory. The number of inmates at both Walezo and Makondeni remains fairly constant since about one-third of all the cases admitted are disabled and unable to look after themselves outside an Institution.

*Tuberculosis*

200. The Report of the World Health Organization Tuberculosis Survey, which was completed on the early part of 1960, has not been received at the time of writing. Decisions as to future policy to be adopted in regard to this disease must necessarily await receipt of this Report, and any recommendations it might contain.

201. Details of the work of the Chest Clinic and tuberculosis Unit are given elsewhere in this Report.

202. The problem of accommodating cases in Pemba awaiting transfer to the Chest Clinic in Zanzibar has been acute during the past year. It is hoped that this will be solved by rebuilding the Stores Section at Chake Chake Hospital to make a new Tuberculosis Ward, accommodation for the Stores having been found in the old quarters attached to the main hospital.

203. The District Medical Officer, Zanzibar, gives figures for the number of defaulters among cases attending as out-patient at Rural Treatment Centres throughout the island. The figures are as follows:—

Health Centre	Total Cases		
	Registered	Defaulters	
Selem	18	...	8
Chaani	18	...	5
Mkokotoni	40	...	17
Misufini	24	...	1
Unguja Ukuu	14	...	4
Makunduchi	30	...	3
Kizimkazi	7	...	1
Jambiani	18	...	3
Mwera	12	...	2
Uzini	31	...	17
Chwaka	11	...	1
Bweleo	12	...	4
	235	...	66

204. Every patient is asked to attend the Chest Clinic in Zanzibar town for three months and the treatment prescribed there and any other instructions are followed up by the Rural Centres. All cases which are regarded as dying or stopping attending for medicine are investigated so far as possible.

### *Enteric Infections*

205. The incidence of enteric fever was again unusually high. A total of 42 cases were notified during 1960 compared with 80 in 1959. All but one case occurred in Zanzibar island, and all were spread fairly evenly over the year. Four cases occurred among the prisoners at a small prison camp simultaneously, so movement of prisoners and staff between the camp and the Central Prison was forbidden until all had been inoculated with TAB vaccine.

206. Another small outbreak occurred at Makunduchi and five patients were transferred to Zanzibar suffering from enteric. Inoculations on a voluntary basis were immediately offered at the Rural Treatment Centre and 2,516, including 178 school children, availed themselves of the inoculations. By this means the outbreak was immediately brought under control.

207. The mode of transmission of the disease in these cases could not be defined, but it seems probable from the distribution that flies might have had some part in it.

### *Epidemic Conjunctivitis*

208. An epidemic of conjunctivitis was reported from the rural areas in both Zanzibar and Pemba about the middle of the year. No definite cause for the outbreak or the method of transmission could be established although flies were considered. Most cases reacted quickly to treatment, but some of the patients had such complication as keratitis and involvement of the iris which might have been due to virus infection.

### *Other Infectious Diseases*

209. Large numbers of cases of chicken pox, whooping cough, measles and mumps were reported during the year. Figures notified were as follows:—

	<i>Zanzibar</i>	<i>Pemba</i>
Chicken Pox	... 689	... 1,806
Whooping Cough	... 497	... 153
Measles	... 176	... 413
Mumps	... 406	... 81

### **Environmental Sanitation**

#### *General*

210. Certain services at present being carried out by the Government in Zanzibar town are due to be handed over next year 1961 to the Municipality of Zanzibar when it comes into existence.

211. The main services to be transferred are street cleansing and disposal of refuse, and scrutiny of certain building plans in connection with the Building Authority. In preparation for the assumption of these responsibilities, the Township Council engaged a Health Superintendent in July, 1960, and who was attached to the Health Department for the remainder of the year in order to acquaint himself with the work.

### *Refuse Disposal*

212. The Health Department was responsible throughout the year for the collection and disposal of household refuse in the four towns of Zanzibar, Wete, Chake Chake, and Mkoani, and also in the Mazizini suburb of Zanzibar. House to house collection is undertaken daily in the Stone Town of Zanzibar and the towns of Pemba, while in the Ngambo area of Zanzibar, daily collection is made from the large number of communal dumps. In this area house to house collection is not practicable because of the problems of road communications. It has long been recognized that such communal dumps are unsatisfactory, because the refuse is deposited over a wide area, and fly breeding takes place readily as the larvae are able to penetrate the underlying earth. A programme of building concrete bases with low walls to contain the refuse, in order to replace the dumps mentioned above, was continued in 1960, and by the end of the year a total of 27 such bases were in use. Unfortunately, it proved to be increasingly difficult to find suitable sites distributed evenly over the area, and in certain cases excellent sites could not be used because the land owners would not agree.

213. In Zanzibar town the refuse is transported to the main dumps by two motor trucks, and a number of handcarts. The latter method which is extravagant in use of man power, is necessary because motor vehicles cannot pass through the numerous narrow streets of the Stone Town and in Ngambo.

214. In Pemba refuse is also transported in handcarts except in Wete where a motor vehicle has recently been provided. In both islands the refuse is disposed off by controlled tipping, except in the case of offensive matter such as condemned meat and fish, dead animals, etc., which are destroyed in an incinerator operated by the Public Works Department in Zanzibar and Pemba. In Zanzibar town approximately 19,000 tons of refuse were removed in 1960 which is about the same amount as in 1959.

215. Reclamation of the creek in Zanzibar again provided the main tipping area in 1960. By the end of the year Hollis Bridge was reached, and all but a small area on the eastern side has now been reclaimed. A start was also made in tipping refuse into two former quarries at Ngambo.

216. In connection with refuse collection, it must be mentioned that a considerable fly infestation took place towards the end of the hot season, although of somewhat less severity than in the two preceding years. Again, the breeding occurred for the most part in the communal rubbish dumps and numerous pit latrines in the Ngambo. In the former, breeding was controlled by clearing the dumps as thoroughly as possible, and spraying

with crude oil. Systematic house to house inspection was also carried out, and notices were served wherever pit latrines were found which required to be emptied. Insecticides were not used against the larvae in view of the danger of introducing resistance. Action against adult flies included the use of cage fly traps and lengths of rope impregnated with "Diazinon" bait solution. The latter was most effective in the markets.

### **Inspection of Registered Premises**

217. This important part of the duties of the Department was maintained throughout the year in both Zanzibar and Pemba Townships. Many visits were paid to all eating houses, dairies, bakehouses, laundries, aerated water and ice factories, and houses let in lodgings. The standard of most of these premises is still low, but is beginning to show some improvement.

#### *Milk*

218. Proper dairies are almost non-existent and milk is mainly sold direct from the farmer to the consumer. Sampling of milk was carried out both in Zanzibar and Pemba. In Zanzibar 337 samples were taken, resulting in 41 prosecutions and 40 convictions for adulteration.

#### *Foodstuffs*

219. As in previous years, in Zanzibar town the meat was inspected by the Veterinary staff of the Agricultural Department. Other inspections were carried out by the Health Department, and a considerable amount of food which was found unfit for human consumption was condemned and destroyed. The bulk of such food was made up of flour, sugar sweepings, rice, onions, tinned food and confectionery.

### **Sewerage and Drainage**

220. It is unfortunately still to be reported that no general water-borne system of sanitation exists anywhere in the Protectorate. Pit latrines remain almost universal in the high density residential areas. It is the policy of the Health Department to encourage installation of water-borne sanitation in all permanent houses. In Zanzibar during 1960, 98 W.C's were installed in existing houses to replace pit latrines, 12 of which were as a direct result of action by the Health Department. In Pemba 33 new W.C's were installed during the year.

221. Stormwater drainage is still unsatisfactory, particularly in Chake Chake where the hilly nature of the town makes the problems of drainage extremely difficult. A close watch has to be kept on all stormwater drains to prevent blocking with consequent mosquito breeding.

222. The supply of latrine slabs to persons living in rural areas was continued during the year from Rural Treatment Centres. In Zanzibar 168 slabs, together with bags of cement were issued to the Treatment Centres. These together with 44 remaining from the previous year made a total of 212 available for issue. By the end of 1960 only 15 slabs remained. Thus in the past two years no less than 354 latrine slabs have been issued in Zanzibar alone.

223. Ten latrine tops of a Water Seal pattern that is new to Zanzibar were manufactured experimentally at the Karimjee Trade School. These are very satisfactory in practice and require only a small amount of water to flush them and keep the building entirely free from flies and smell. It is hoped that in future the use of these will spread considerably, particularly in Ngambo, and plans are now being made to arrange for the manufacture of further supplies.

### **Water Supplies**

224. The majority of townships in both islands now have a piped water supply derived from springs and bore-holes. Wherever possible the water is regularly checked by bacteriological examination and chlorination is carried out where necessary. In the rural areas the water supply is by means of wells and small streams. The latter are also used for the washing of clothes, and are frequently a source of bilharzia.

### **Housing and Town Planning**

225. The provisions of the Town and Country Planning Decree continued to be applied in the Zanzibar Planning Area, and in the Planning Areas of the three Pemba Townships. In each case, control by these and the Building Authorities extends outside the township boundaries to ensure that peri-urban development proceeds satisfactorily.

226. In Zanzibar the Building Authority dealt with applications to erect 61 new permanent houses, and 142 new huts, and to effect alterations and additions to 270 permanent houses and 1,374 huts. The Pemba Joint Building and Town Planning Authority dealt with applications to erect 5 new permanent houses and 153 new huts, and to effect alterations and additions to 21 permanent houses and 533 huts.

### **School Medical Services**

227. In Pemba all schools were visited twice during the year by the Medical Officer in charge of Rural Health Services. All new entrants and leaving pupils were examined, vaccinated, treated, or referred to hospital if necessary.

228. The general standard of health and cleanliness among the school children is reported as good. The commonest diseases seen were bilharzia and anaemia. The incidence of dental caries is also reported as being high.

229. In Zanzibar during 1960 one Medical Officer and a Hospital Assistant were allocated for school medical duty for three days in every week.

230. All new entrants and school leavers were medically inspected, and as such inspection had had to be postponed in 1959 due to lack of staff, it was also necessary to see the pupils of Koran Class in Standard I and Standard VIII.

231. A total of 2,608 new entrants were examined including certain children who had not been seen in the previous year. Four hundred and sixty-nine leavers were also seen, making a total of 3,077 children given a full medical examination. At the same time vaccination against smallpox was carried out for all pupils who had not previously been vaccinated, or whose vaccinations were unsuccessful.

232. The Medical Officer reports that the average nutritional state of the children in Zanzibar island is fairly good. Very few pupils were found showing evidence of poor nutrition, and in the older age groups all the children were well nourished. No signs of serious vitamin deficiencies were found with the exception of a few cases showing lack of vitamin "B".

233. In the town schools most of the children were clean and had their clothes regularly washed, and the majority wore shoes. In the rural schools many of the children are reported as being dirty, particularly the younger new entrants.

234. Only nine cases of infestation with head lice were found, and none with body lice.

235. As stated above, vaccination against smallpox was carried out on every child who had not previously been vaccinated. Most of the children in the town schools were found to have already been vaccinated when they joined the school, but in the rural areas large numbers still reach school-age before vaccination.

236. The incidence of carious teeth was reported as high. The patchy distribution is suggestive of some external influence not yet known which results in many carious teeth being found in certain areas and very few in others.

237. Complaints of disturbed vision were conspicuously common among the Indian children, especially at Primary school leaving age. All such pupils were referred for examination at the main hospital. Only twelve children were found suffering from Strabismus out of the total examined, i.e. about 0.3 per cent.

238. Conjunctivitis was found to be common in certain schools, particularly on the east coast of the island, and as in Pemba, seems to occur in epidemic form at certain seasons of the year.

239. Infections of the ear are reported to be very rare, and no deafness was reported or complained of.

240. Only three abnormalities of speech, i.e. "stammering" were found.

241. Among the 3,000 children examined, 128 showed symptoms or signs of respiratory complaints. A few had history of asthma, but the majority had only minor respiratory infections. Those who were suspected of Tuberculosis were referred to the Tuberculosis Unit.

242. Fifteen children were found to have Cardiac murmurs, but only four of these were referred to hospital for investigation as the others appeared to be functional or associated with anaemia.

243. The incidence of enlarged spleen was reported as being about 13 per cent. of the whole group examined. This is a very low figure for this particular age group compared with three years ago before the malaria eradication scheme was begun.

244. Eight children were found to have inguinal hernias. Umbilical hernia was much more common, particularly among the young children attending rural schools. One hundred and twelve such cases were found among the new entrants, but only three among the school leavers, indicating that the majority of these cured themselves without surgical intervention.

245. In some of the rural schools, haematuria was found to be prevalent due to infection with *s. haemotobium*. These children were treated at nearby Dispensaries, but re-infection is very common because the children return to the source of infection in the water holes where they bathe and wash their clothes.

246. Only 100 children were diagnosed clinically as suffering from anaemia. The distribution of this was not uniform, but higher in certain areas than others. The most probable cause is Hookworm

247. Yaws appears to be disappearing and only nine cases were found. This was very prevalent in the rural areas some years ago, but the present low incidence shows the result of modern treatment and control.

248. Occasionally children were found with defects due to Poliomyelitis. About ten children in all were affected in this way, but not seriously enough to interfere with their attendance at school.

249. A special investigation was made during the year into the occurrence of Schistosomiasis at Donge school. Ninety-nine children were put on treatment for this disease, and were treated with Nilodin. The majority of these stopped passing blood in the urine immediately, but a six month follow up showed that nearly 50 per cent. of them relapsed. The water holes close to the schools were visited at Kooni, Kiwarani, and Ziwani. In all these places snails were found of the species capable of transmitting the disease.

250. At Kiembe Samaki school a school teacher was found to be suffering from respiratory Tuberculosis. As a result of this all the staff and pupils of this school were specially investigated for signs of the disease. All contacts were Mantoux tested and all negative reactors were given B.C.G. The suspicious cases were later screened by the Chest Unit.

### Port Health

251. The main port of the Protectorate is Zanzibar, at which all ships normally must obtain pratique. Maritime declarations of Health under the International Sanitary Regulations are demanded from all ocean-going vessels and coastal shipping, and all passengers and crew are required to be in possession of valid international certificates of vaccination against smallpox.

252. Under a Government Notice published in 1953 certain coastal vessels are permitted to proceed direct to the port of Wete in Pemba, and clearance is effected by the health authorities there. All other shipping must first receive pratique in Zanzibar.

253. Throughout the year effect was given to the quarantine rule which enables vessels other than those defined as "native craft" to obtain pratique prior to arrival in harbour, thus rendering it unnecessary for the port health authorities to board the vessel. This rule is only applied to those ships which are not primarily passenger-carrying vessels, as it is essential to retain supervision of passengers' health documents.

254. Conditions which must be satisfied are the prior notice of arrival of the ship, together with an assurance in writing that the ship is known to be free from quarantinable disease, and the furnishing immediately on arrival of a Maritime Declaration of Health. During the year 160 vessels obtained pratique under this rule.

255. The number of vessels cleared in the port of Zanzibar during 1960 was 685 ships and 1,611 other craft including dhows. The total number of passengers arriving by sea was 19,377.

256. At the airport situated four miles from Zanzibar town, the examination of health documents is carried out by Immigration Officers on behalf of the Health Department. In 1960, 2,455 aircraft landed, and 21,374 passengers arrived.

### **Health of Prisoners**

257. There are two prisons in the Protectorate, one in Zanzibar, and one in Wete, Pemba. In addition, four prison camps exist on Zanzibar island, and one in Pemba.

258. In Wete, a daily sick parade is held at the hospital out-patient clinic for prisoners; those at the prison camp attend Chake Chake hospital.

259. In Zanzibar, the prison has its own treatment room and small twelve-bedded ward under the control of the Medical Officer in charge, Prisons, and a resident Hospital Assistant. All new admissions to the prison are examined by the Medical Officer in charge on his regular visits.

260. In addition to the twelve beds mentioned above, five isolation beds are available for prisoners suffering from communicable diseases.

261. The camps in Zanzibar are supervised by Rural Health Assistants at the Rural Treatment Centre nearest to each camp. Two of the camps receive visits daily, while the others have twice weekly visits.

262. In Zanzibar the Medical Officer visits the prison twice a week as routine to examine new prisoners, sick prisoners in the infirmary, or those referred to him by the Assistant, and to re-examine prisoners selected for transfer to prison camps. He also inspects rations as supplied by contractors and generally supervises conditions and sanitation in the prison.

263. In Zanzibar Prison 1,657 prisoners were under medical care during the year. There were 197 admissions to the prison hospitals, compared with 199 in 1959. Thirty-seven of these were due to Chickenpox. The daily average number of prisoners in hospital fell from 8.6 to 7.8 in 1960.

264. The following gives a comparison of the number of cases of certain diseases which occurred in 1960 compared with 1959.

Diseases	1959	1960
Dysentery .. .. ..	67	15
Malaria .. .. ..	92	4
Hookworm .. .. ..	234	129
Schistosomiasis .. .. ..	185	156
Pulmonary Tuberculosis .. ..	8	9
Leprosy .. .. ..	10	4
Chickenpox .. .. ..	59	37

265. The incidence of sickness is shown by the following table giving a comparison with the preceeding year:—

	1959	1960
Number of prisoners admitted in the year .. .. ..	1,446	1,261
Number of prisoners under care	1,730	1,657
Number of deaths .. ..	1	1
Number admitted to Infirmary ..	199	197
Daily average in Infirmary ..	8.6	7.8
Number of out-patients .. ..	8,110	13,663
Daily average of out-patients ..	22.2	37.3

266. Throughout the year the Medical Officer made monthly visits to the four prison camps at Kichwele, Pangani, Dangoni, and Kinuchamoshi. The prisoners at these camps which often contain from thirty to fifty prisoners each are outstandingly fit, and complaints of diet are very rare, although it is the same as in the Central Prison. At the end of the year a small epidemic of enteric fever broke out at Kinuchamoshi, ten cases being admitted to the Hassanali Karimjee Jivanjee Hospital, Zanzibar. Mass inoculations by the Medical Officer of Health, a partial quarantine of the camp, and the boiling of drinking water helped to keep the epidemic to modest proportions.

## PART V.—RESEARCH

### Pathology

267. Special investigations conducted during the year by the Pathologist covered:—

- (i) Review of pathological conditions observed in prisoners on admission to the Central Prison, Zanzibar. This is a continuation of the work begun in 1957.
- (ii) Investigations into anaemia of children.
- (iii) Collection of data regarding the incidence of Brucella and Weil-Felix antibodies in various sections of the population.

268. The completion of the first investigation into the health of prisoners should be accomplished in 1961.

269. The study of anemias in children turned out more difficult than anticipated owing to the problems of follow-up. A new form was printed at the end of the year which should enable information to be collected more easily.

270. The serological research will be continued into 1961 as opportunity arises.

### *Surgery*

271. The Surgical Specialist has described a condition which appears to be important in Zanzibar, namely, quiet progressive hydronephrosis due to bilharzial stricture of the urethra.

272. During 1960 the establishment of a special clinic for schistosomiasis brought this condition to light, and a record is now kept of all such cases including clinical evaluation, urine reports, X-rays, cystoscopy findings, and operation records.

273. This problem is of particular importance in the case of a patient attending as an out-patient complaining of vague ill-health due to uraemia, having forgotten an episode of bilharzial haematuria in the past. Many of the cases of anaemia may well be due to uraemia following this cause, and several cases show calcified bladder walls on X-ray of the pelvis. Further investigations will be carried on in 1961.

### *Tuberculosis*

274. The officer in charge of the Chest Unit has produced figures to show the operation of the tuberculosis work in Zanzibar and Pemba over the past five years. His conclusions can be summarised as follows:—

(i) The total number of cases diagnosed annually over the last three years has remained steady, but is 50 per cent. more than the numbers shown for the previous years. This is obviously due to the better facilities now available for diagnosis and the public becoming aware of the fact that the disease can now be cured comparatively quickly.

(ii) The number of cases coming from Pemba has risen from 50 in 1956 to 77 in 1960. At the same time the number of mainland cases treated each year has reached an average of 40 compared with the figure of 20 or less in previous years.

(iii) For some reason the maximum number of defaulters are for those diagnosed in 1957 and 1958. The 1959 and 1960 cases showed a much lower percentage.

(iv) The figures produced show that many more cases now reach a stage of quiescence in less than two years, than previously. At the same time the number of cases with persistent positive sputum is less than had originally been thought.

## **PART VI.—LEGISLATION**

275. The Pharmacy and Poisons Rules made under the Pharmacy and Poisons Decree, 1959, were published in December, 1960.

## RETURN OF DISEASES: IN-PATIENTS, 1960

Code	List No.	Diseases	Total cases treated	Deaths
001.008	A 1	Respiratory Tuberculosis .. .. ..	428	.. 33
010	A 2	Tuberculosis of Meninges and Central Nervous System .. .. ..	10	.. -
011	A 3	Tuberculosis of Intestines, Peritoneum and Mesenteric Glands .. .. ..	4	.. -
012.013	A 4	Tuberculosis of bones and joints .. .. ..	14	.. -
014.09	A 5	Tuberculosis, all other forms .. .. ..	19	.. -
020	A 6	Congenital Syphilis .. .. ..	-	.. -
021.0.021.1	A 7	Primary Syphilis .. .. ..	-	.. -
021.2.021.4	A 7	Secondary Syphilis .. .. ..	4	.. -
024	A 8	Tabes Dorsalis .. .. ..	1	.. -
025	A 9	General Paralysis of Insane .. .. ..	3	.. -
022.023	A 10	Cardio Vascular Syphilis .. .. ..	1	.. -
026.029	A 10	All other Syphilis .. .. ..	3	.. -
030.031	A 11	Gonorrhoea, Genito-Urinary .. .. ..	12	.. 1
033	A 11	Gonococcal infection of eye .. .. ..	3	.. -
032.034.035	A 11	Other Gonococcal infections .. .. ..	15	.. -
040	A 12	Typhoid Fever .. .. ..	54	.. -
041.042	A 13	Salmonella Infections .. .. ..	-	.. -
043	A 14	Cholera .. .. ..	-	.. -
044	A 15	Brucellosis .. .. ..	3	.. -
045	A 16	Bacillary Dysentery .. .. ..	110	.. 9
046	A 16	Amoebiasis .. .. ..	15	.. 1
047.048	A 16	Other unspecified dysentery .. .. ..	41	.. -
050	A 17	Scarlet Fever .. .. ..	-	.. -
051	A 18	Streptococcal Sore Throat .. .. ..	8	.. -
052	A 19	Erysipelas .. .. ..	-	.. -
053	A 20	Septicaemia and Pyaemia .. .. ..	3	.. -
055	A 21	Diphtheria .. .. ..	2	.. 1
056	A 22	Whooping Cough .. .. ..	16	.. 1
057	A 23	Meningococcal Infections .. .. ..	-	.. -
058	A 24	Plague .. .. ..	-	.. -
060	A 25	Leprosy .. .. ..	20	.. -
061	A 26	Tetanus .. .. ..	26	.. 5
062	A 27	Anthrax .. .. ..	-	.. -
030	A 28	Acute Poliomyelitis .. .. ..	12	.. 2
082	A 29	Acute infectious Encephalitis .. .. ..	-	.. -
081.083	A 30	Late Effects Poliomyelitis and infectious Encephalitis .. .. ..	1	.. -
084	A 31	Variola major .. .. ..	-	.. -
084	A 31	Variola minor .. .. ..	-	.. -
085	A 32	Measles .. .. ..	12	.. -
091	A 33	Yellow Fever .. .. ..	-	.. -
092	A 34	Infectious Hepatitis .. .. ..	46	.. -
094	A 35	Rabies .. .. ..	-	.. -
100	A 36	Louse-borne Epidemic Typhus .. .. ..	-	.. -
101	A 36	Flea-borne Endemic Typhus .. .. ..	-	.. -
104	A 36	Tick-borne Typhus .. .. ..	-	.. -
N.O.S. 102-108	A 36	Other Rickettsial Diseases .. .. ..	-	.. -
110	A 37	B.T. Malaria .. .. ..	2	.. -
111	A 37	Qt. Malaria .. .. ..	2	.. -
112	A 37	S.T. Malaria .. .. ..	100	.. 2
115	A 37	Blackwater fever .. .. ..	-	.. -
N.O.S. 113-117	A 37	Other forms of Malaria .. .. ..	15	.. 1
123.0	A 38	Schistosomiasis (haematobium) .. .. ..	37	.. -
		Carried forward .. .. ..	1,042	56

Code	List No.	Diseases	Total cases treated	Deaths
		Brought forward ..	1,042	56
123.1	A 38	Schistosomiasis (mansoni) .. .. ..	1	..
123.2	A 38	Schistosomiasis (japonicum) .. .. ..	—	..
123.3	A 38	Other unspecified Schistosomiasis .. .. ..	1	..
125	A 39	Hydatid Diseases .. .. ..	—	..
127	A 40	Onchocerciasis .. .. ..	—	..
	A 40	Loiasis .. .. ..	—	..
127	A 40	Filariasis (bancrofti) .. .. ..	9	..
127	A 40	Other Filariasis .. .. ..	44	..
129	A 41	Ankylostomiasis .. .. ..	22	..
126	A 42	Tapeworm and other cestode infestations ..	4	..
130.0	A 42	Ascariasis .. .. ..	7	..
130.3	A 42	Guineaworm .. .. ..	—	..
N.O.S. 133-130	A 42	Other diseases due to Helminths .. .. ..	6	..
037	A 43	Lymphogranuloma Venereum .. .. ..	—	..
038	A 43	Granuloma Inguinale .. .. ..	—	..
039	A 42	Other unspecified Venereal diseases .. .. ..	3	..
049	A 43	Food poisoning, infective and toxic (excepting <i>Salmonella</i> infections) .. .. ..	1	..
071	A 43	Relapsing Fever .. .. ..	—	..
072	A 43	Weil's Disease .. .. ..	—	..
073	A 43	Yaws .. .. ..	1	..
087	A 43	Chickenpox .. .. ..	8	..
090	A 43	Dengue .. .. ..	—	..
095	A 43	Trachoma .. .. ..	2	..
096.7	A 43	Sandfly fever .. .. ..	—	..
120	A 43	Leishmaniasis .. .. ..	—	..
121.0	A 43	Trypanosomiasis (Gambiense) .. .. ..	—	..
121.0	A 43	Trypanosomiasis (Rhodesiense) .. .. ..	—	..
121.2	A 43	Other unspecified trypanosomiasis .. .. ..	—	..
131	A 43	Dermatophytosis (Tinea) .. .. ..	—	..
135	A 43	Scabies .. .. ..	1	..
N.O.S.036.122	A 43	Other infections and protozoal diseases .. .. ..	5	..
N.O.S.132.138	A 43	Other Parasitic diseases .. .. ..	2	..
140.148	A 44	Malignant Neoplasm Mouth and pharynx .. .. ..	7	..
150	A 45	Malignant Neoplasm of Oesophagus .. .. ..	8	..
151	A 46	Malignant Neoplasm of Stomach .. .. ..	2	..
152.153	A 47	Malignant Neoplasm of Intestine .. .. ..	2	..
154	A 48	Malignant Neoplasm of Rectum .. .. ..	2	..
161	A 49	Malignant Neoplasm of Larynx .. .. ..	2	..
162.163	A 50	Malignant Neoplasm of Trachea, bronchus and lung not specified as secondary .. .. ..	6	..
170	A 51	Malignant Neoplasm of breast .. .. ..	2	..
171	A 52	Malignant Neoplasm of cervix uteri .. .. ..	13	..
172.174	A 53	Malignant Neoplasm of other unspecified parts of uterus .. .. ..	3	..
177	A 54	Malignant Neoplasm of prostate .. .. ..	5	..
190.191	A 55	Malignant Neoplasm of skin .. .. ..	10	..
196.197	A 56	Malignant Neoplasm of bone and connected tissue .. .. ..	—	..
N.O.S.155.299	A 57	Malignant Neoplasm of all other unspecified sites .. .. ..	50	..
204	A 58	Leukaemia and Aleukaemia .. .. ..	1	..
200.203.205	A 59	Lymphosarcoma and other Neoplasms of lymphatic and haematopoietic systems .. .. ..	9	..
210.239	A 60	Benign Neoplasms and unspecified Neoplasms .. .. ..	39	..
250.251	A 61	Non-toxic goitre .. .. ..	1	..
252	A 62	Thyrotoxicosis .. .. ..	4	..
260	A 63	Diabetes Mellitus .. .. ..	77	..
280	A 64	Beriberi .. .. ..	1	..
281	A 64	Pellagra .. .. ..	—	..
		Carried forward ..	1,406	89

Code	List No.	Diseases	Brought forward	..	Total cases treated	Deaths
282	A 64	Scurvy .. .. .. .. ..	..	1,406	89	
286.6	A 64	Kwashiorkor .. .. .. ..	..	31	..	6
283.286	A 64	Other Deficiency States .. .. .. ..	..	31	..	11
290	A 65	Pernicious and other hyperchromic anaemia ..	..	23	..	1
291	A 65	Iron deficiency anaemias .. .. ..	..	270	..	23
292.293	A 65	Other anaemias .. .. ..	..	21	..	5
241	A 66	Asthma .. .. .. ..	..	97	..	5
N.O.S.240.799	A 66	Other allergic endocrine metabolic and blood diseases .. .. .. ..	..	24	..	1
300.309	A 67	Psychoses .. .. .. ..	..	83	..	7
310.324.326	A 68	Psychoneuroses and disorders of personality ..	..	39	..	-
325	A 69	Mental deficiency .. .. .. ..	..	8	..	-
330.334	A 70	Vascular lesions affecting central nervous system ..	..	22	..	12
340	A 71	Meningitis (except meningococcal and tuberculous) .. .. .. ..	..	8	..	2
345	A 72	Multiple sclerosis .. .. .. ..	..	1	..	-
353	A 73	Epilepsy .. .. .. ..	..	23	..	-
370.379	A 74	Inflammatory diseases of eye .. .. ..	..	45	..	1
385	A 75	Cataract .. .. .. ..	..	55	..	-
387	A 76	Glaucoma .. .. .. ..	..	16	..	-
390	A 77	Otitis externa .. .. .. ..	..	4	..	-
391.393	A 77	Otitis media and mastoiditis .. .. ..	..	12	..	-
394	A 77	Other inflammatory diseases of ear .. .. ..	..	1	..	-
N.O.S.341.369	A 78	All other diseases of nervous system sense organs and auditory system .. .. ..	..	27	..	1
395.398	A 78	All other diseases and conditions of eye ..	..	56	..	-
N.O.S.380.389	A 78	Rheumatic fever .. .. .. ..	..	5	..	-
400.402	A 79	Chronic rheumatic heart diseases .. ..	..	7	..	-
410.416	A 80	Arteriosclerotic and degenerative heart diseases ..	..	70	..	10
420.422	A 81	Other diseases of heart .. .. .. ..	..	101	..	20
430.434	A 82	Hypertension with heart disease .. ..	..	43	..	4
440.443	A 83	Hypertension without mention of heart ..	..	72	..	9
444.447	A 84	Diseases of arteries .. .. ..	..	9	..	2
450.456	A 85	Other diseases of circulatory system .. ..	..	14	..	5
460.468	A 86	Acute upper respiratory infections .. ..	..	55	..	6
470.475	A 87	Influenza .. .. .. ..	..	7	..	-
480.483	A 88	Lobar pneumonia .. .. .. ..	..	318	..	11
490	A 89	Bronchopneumonia .. .. .. ..	..	104	..	24
491	A 90	Primary atypical other and unspecified pneumonia .. .. .. ..	..	21	..	2
492.493	A 91	Acute Bronchitis .. .. .. ..	..	118	..	3
500	A 92	Bronchitis, chronic and unqualified .. .. ..	..	11	..	-
501.502	A 93	Hypertrophy of tonsils and adenoids .. .. ..	..	52	..	-
510	A 94	Empyema and abscess of lung .. .. ..	..	9	..	2
518.521	A 95	Pleurisy .. .. .. ..	..	9	..	-
519	A 96	Pneumoconiosis .. .. .. ..	..	2	..	-
523	A 97	All other respiratory diseases .. .. ..	..	52	..	2
N.O.S.511.527	A 97	Dental caries .. .. .. ..	..	3	..	-
530	A 98	All other diseases of teeth and supporting structures .. .. .. ..	..	20	..	-
531.535	A 98	Ulcer of the stomach .. .. .. ..	..	16	..	-
540	A 99	Ulcer of duodenum .. .. .. ..	..	20	..	2
541	A 100	Gastritis and duodenitis .. .. .. ..	..	38	..	-
543	A 101	Appendicitis .. .. .. ..	..	37	..	1
550.553	A 102	Intestinal obstruction and hernias .. .. ..	..	637	..	27
560.561.570	A 103	Gastro-enteritis and colitis between four weeks and two years .. .. .. ..	..	162	..	25
571.0	A 104	Gastro-enteritis and colitis ages two years and over .. .. .. ..	..	156	..	12
571.1	A 104	Carried forward ..	..	4,471	..	331

Code	List No.	Diseases	Total cases treated	Deaths
		Brought forward	.. 4,471	331
572	A 104	Chronic enteritis and ulcerative colitis	.. 6	1
581	A 105	Cirrhosis of liver .. .. .. ..	.. 37	1
584.585	A 106	Cholelithiasis and Cholecystitis ..	.. 5	—
536.587	A 107	Other diseases of digestive system ..	.. 161	6
590	A 108	Acute nephritis .. .. .. ..	.. 7	—
591.594	A 109	Chronic, other and unspecified nephritis	.. 5	—
600	A 110	Infections of kidney .. .. .. ..	.. 18	2
602.604	A 111	Calculi of urinary system .. .. .. ..	.. 54	—
610	A 112	Hyperplasia of prostate .. .. .. ..	.. 52	8
620.621	A 113	Diseases of breast .. .. .. ..	.. 13	—
613	A 114	Hydrocele .. .. .. ..	.. 182	—
634	A 114	Disorders of Menstruation .. .. .. ..	.. 30	—
N.O.S.601.617	A 114	Other diseases of genito-urinary system and male genital organs .. .. .. ..	.. 225	10
N.O.S.622.637	A 114	Other diseases of uterus and female genital organs .. .. .. .. ..	.. 248	2
640.641.681	A 115	Sepsis of pregnancy, childbirth, and puerperium	.. 12	2
682.684				
642.652.685.686	A 116	Toxaemias of pregnancy and the puerperium ..	.. 46	2
643.644	A 117	Haemorrhage of pregnancy and childbirth ..	.. 5	2
650	A 118	Abortion without mention of sepsis or toxæmia	.. 204	4
650	A 119	Abortion with sepsis .. .. .. ..	.. 12	—
660	A 120	Delivery without complication .. .. .. ..	.. 1,559	2
N.O.S.645.689	A 120	Other complications of pregnancy, childbirth and puerperium .. .. .. ..	.. 240	11
690.689	A 121	Infections of skin and subcutaneous tissue ..	.. 294	4
720.725	A 122	Arthritis and spondylitis .. .. .. ..	.. 76	—
726.727	A 123	Muscular rheumatism and rheumatism unspecified .. .. .. ..	.. 10	1
730	A 124	Osteomyelitis and periostitis .. .. .. ..	.. 13	—
737.745.749	A 125	Ankylosis and acquired musculo-skeletal deformities .. .. .. ..	.. 5	—
715	A 126	Chronic ulcer of skin .. .. .. ..	.. 27	1
700.714.716	A 126	All other diseases of skin .. .. .. ..	.. 43	1
731.736.738	A 126	All other diseases of musculo-skeletal system ..	.. 30	—
744				
751	A 127	Spina bifida and meningocele .. .. ..	.. 1	—
754	A 128	Congenital malformations of circulatory organs	— ..	—
N.O.S.750.759	A 129	Other congenital malformations .. ..	.. 10	—
760.761	A 130	Birth injuries .. .. .. ..	.. 1	—
762	A 131	Post-natal asphyxia and atelectasis .. .. ..	.. —	—
764	A 132	Diarrhoea of newborn (under four weeks) ..	.. 3	3
765	A 132	Ophthalmia neonatorum .. .. ..	.. 2	—
763.766.768	A 132	Other infections of newborn .. .. ..	.. 2	—
770	A 133	Haemolytic disease of newborn .. .. ..	.. 4	2
769.771.772	A 134	All other defined diseases of early infancy ..	.. 6	1
773.776	A 135	Ill-defined diseases peculiar to early infancy and immaturity unqualified .. .. ..	.. 6	2
794	A 136	Senility without mention of Psychosis .. ..	.. 119	60
788.8	A 137	Pyrexia of unknown origin .. .. ..	.. 296	19
793	A 137	Observation, without need for further medical care .. .. .. .. ..	.. 377	1
		Carried forward	.. 8,917	479

<i>Code</i>	<i>List No.</i>	<i>Diseases</i>	<i>Total cases treated</i>	<i>Deaths</i>
		Brought forward ..	8,917	479
N.O.S.780.795	A 137	All other ill-defined causes of morbidity ..	6	—
N.800-N.804	AN 138	Fracture of skull .. .. .. ..	20	3
N.805-N.809	AN 139	Fracture of spine and trunk .. .. ..	58	6
N.810-N.829	AN 140	Fracture of limbs .. .. .. ..	192	6
N.830-N.839	AN 141	Dislocation without fracture .. .. ..	26	—
N.840-N.848	AN 142	Sprains and strains of joints and adjacent muscles ..	43	—
N.830-N.856	AN 143	Head injuries (excluding fracture) .. ..	39	2
N.860-N.869	AN 144	Internal injury of chest, abdomen and pelvis ..	3	2
N.870-N.908	AN 145	Laceration and open wounds .. .. ..	165	1
N.910-N.929	AN 146	Superficial injury, contusion and crushing with intact skin surface .. .. .. ..	63	—
N.930-N.936	AN 147	Effects of foreign body entering through orifice ..	19	1
N.940-N.949	AN 148	Burns .. .. .. .. ..	68	6
N.960-N.979	AN 149	Effects of poisons .. .. .. .. ..	43	2
N.950.959	AN 150	All other unspecified effects of external cause ..	20	1
N.980.999				
		TOTAL ..	<u>9,682</u>	<u>509</u>

## Appendix II

## RETURN OF DISEASES: OUT-PATIENTS, 1960

Code	Diseases					
001-008	..	Respiratory Tuberculosis	..	..	..	120
010-019	..	Other Tuberculosis	..	..	..	58
020-029	..	Syphilis	..	..	..	461
030-035	..	Gonorrhoea	..	..	..	4,374
036-039	..	Other Veneral Diseases	..	..	..	527
045	..	Bacillary Dysentery	..	..	..	516
046	..	Amoebic Dysentery	..	..	..	86
055	..	Diphtheria	..	..	..	—
056	..	Whooping Cough	..	..	..	1,511
057-340	..	Meningitis (Excluding Tuberculosis)	..	..	..	—
058	..	Plague	..	..	..	—
060	..	Leprosy	..	..	..	167
061	..	Tetanus	..	..	..	12
062	..	Anthrax	..	..	..	—
071	..	Relapsing Fever	..	..	..	—
073	..	Yaws	..	..	..	5,289
080	..	Acute Poliomyelitis	..	..	..	13
084	..	Variola major	..	..	..	—
084	..	Variola minor	..	..	..	—
085	..	Measles	..	..	..	2,052
086	..	Rubella	..	..	..	—
087	..	Chickenpox	..	..	..	5,545
089	..	Mumps	..	..	..	933
092	..	Infectious Hepatitis	..	..	..	518
095	..	Trachoma	..	..	..	37
110	..	B.T. Malaria	..	..	..	77
111	..	Qt. Malaria	..	..	..	—
112	..	S.T. Malaria	..	..	..	2,686
113-117	..	Other forms of Malaria	..	..	..	5,322
115	..	Blackwater	..	..	..	—
121	..	Trypanosomiasis	..	..	..	—
123-0	..	Schistosomiasis (haematobium)	..	..	..	4,971
123-2	..	Schistosomiasis (mansoni)	..	..	..	49
126	..	Tapeworm	..	..	..	44
127	..	Onchocerciasis	..	..	..	—
129	..	Ankylostomiasis	..	..	..	3,679
130.0	..	Ascariasis	..	..	..	691
131	..	Tinea	..	..	..	330
135	..	Scabies	..	..	..	2,851
N.O.S.						
036-138	..	Other infective and parasitic diseases	..	..	..	1,696
140-205	..	Malignant Neoplasms	..	..	..	12
210-239	..	Benign and other Neoplasms	..	..	..	160
241	..	Asthma	..	..	..	2,110
286-239	..	Kwashiorkor	..	..	..	13
290-293	..	Anaemia	..	..	..	25,009
240-299	..	Other allergic, endocrine, metabolic and nutritional diseases	..	..	..	1,125
300-326	..	Mental disorder	..	..	..	3
353	..	Epilepsy	..	..	..	8
330-369	..	Other diseases of the nervous system and sense organs	..	..	..	2,928
370	..	Conjunctivitis and Ophthalmia	..	..	..	19,425
373	..	Stye	..	..	..	183
389	..	Blindness	..	..	..	25
371-388	..	Other diseases of eye (not trachoma)	..	..	..	3,666
390-298	..	Diseases of the Ear and mastoid process	..	..	..	6,392
		Carried forward	..	105,674		

<i>Code</i>	<i>Diseases</i>	Brought forward	..	105,674
400-447 ..	Diseases of the Heart .. .. .. ..	233		
450-468 ..	Other Circulatory diseases .. .. .. ..	226		
490-493 ..	Pneumonia .. .. .. ..	1,230		
470-527 ..	Other diseases of the respiratory system (including coryza, pharyngitis, and bronchitis) .. ..	37,160		
530 ..	Dental caries .. .. .. ..	3,430		
538 ..	Stomatitis and other diseases of the buccal cavity .. .. .. ..	2,954		
560.561.570 ..	Intestinal obstruction and hernia .. .. .. ..	1,117		
571.0 ..	Gastroenteritis under two years .. .. .. ..	5,005		
571.1 ..	Gastroenteritis over two years .. .. .. ..	5,391		
537-587 ..	Other diseases of Digestive System .. .. .. ..	18,985		
613 ..	Hydrocele .. .. .. ..	695		
590-617 ..	Other diseases of genito-urinary system and male genital organs .. .. .. ..	2,779		
636 ..	Sterility (female) .. .. .. ..	10		
620-637 ..	Other diseases of uterus and female genital organs .. .. .. ..	958		
— ..	Normal pregnancy .. .. .. ..	3,124		
650.650 ..	Abortion .. .. .. ..	156		
640-689 ..	Other diseases of childbirth .. .. .. ..	30		
690-698 ..	Boils and infection of skin and subcutaneous tissue .. .. .. ..	14,146		
715 ..	Chronic ulcers .. .. .. ..	10,805		
700-716 ..	Other diseases of the skin .. .. .. ..	4,807		
720-759 ..	Diseases of bones, joints and malformation .. .. .. ..	11,109		
760-776 ..	Neonatal diseases .. .. .. ..	14		
788.08 ..	Pyrexia of unknown origin .. .. .. ..	13,501		
780.795 ..	All other ill-defined causes of morbidity .. .. .. ..	11,343		
N800-N839 ..	Fractures and dislocations .. .. .. ..	196		
N840-N848 ..	Sprains .. .. .. ..	1,701		
N930-N936 ..	Foreign bodies .. .. .. ..	469		
N940-N949 ..	Burns and Scalds .. .. .. ..	1,502		
N960-N979 ..	Poisoning .. .. .. ..	44		
N850-N999 ..	Other injuries and wounds .. .. .. ..	15,138		
Y00-Y18 ..	Examination .. .. .. ..	361		
	<b>TOTAL</b> ..	<b>274,293</b>		